

RECEIVED

JAN 08 2002

TECH CENTER 1600/2900

OIPE

#4

RAW SEQUENCE LISTING

DATE: 12/18/2001

PATENT APPLICATION: US/09/783,338A

TIME: 16:37:40

Input Set : N:\Crif3\RULE60\09783338A.raw

Output Set: N:\CRF3\12182001\I783338A.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Glazer, Peter M.

6 Havre, Pamela A.

8 (ii) TITLE OF INVENTION: Chemically Modified Oligonucleotide for

9 Site-Directed Mutagenesis

11 (iii) NUMBER OF SEQUENCES: 13

13 (iv) CORRESPONDENCE ADDRESS:

14 (A) ADDRESSEE: Patrea L. Pabst

15 (B) STREET: 1100 Peachtree Street, Suite 2800

16 (C) CITY: Atlanta

17 (D) STATE: Georgia

18 (E) COUNTRY: USA

19 (F) ZIP: 30309-4530

21 (v) COMPUTER READABLE FORM:

22 (A) MEDIUM TYPE: Floppy disk

23 (B) COMPUTER: IBM PC compatible

24 (C) OPERATING SYSTEM: PC-DOS/MS-DOS

25 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25

27 (vi) CURRENT APPLICATION DATA:

C--> 28 (A) APPLICATION NUMBER: US/09/783,338A

C--> 29 (B) FILING DATE: 14-Feb-2001

30 (C) CLASSIFICATION:

32 (vii) PRIOR APPLICATION DATA:

33 (A) APPLICATION NUMBER: 08/083,088

34 (B) FILING DATE: 25-JUN-1993

37 (viii) ATTORNEY/AGENT INFORMATION:

38 (A) NAME: Pabst, Patrea L.

39 (B) REGISTRATION NUMBER: 31,284

40 (C) REFERENCE/DOCKET NUMBER: YU109

43 (ix) TELECOMMUNICATION INFORMATION:

44 (A) TELEPHONE: (404)-815-6508

45 (B) TELEFAX: (404)-815-6555

47 (2) INFORMATION FOR SEQ ID NO: 1:

49 (i) SEQUENCE CHARACTERISTICS:

50 (A) LENGTH: 11 base pairs

51 (B) TYPE: nucleic acid

52 (C) STRANDEDNESS: single

53 (D) TOPOLOGY: linear

55 (ii) MOLECULE TYPE: DNA (genomic)

57 (iii) HYPOTHETICAL: NO

59 (iv) ANTI-SENSE: NO

61 (ix) FEATURE:

62 (A) NAME/KEY: misc_feature

63 (B) LOCATION: 1..11

64 (D) OTHER INFORMATION: /function= "N is

65 4'-hydroxymethyl-4,5',8-trimethylpsoralen"

ENTERED

RAW SEQUENCE LISTING

DATE: 12/18/2001

PATENT APPLICATION: US/09/783,338A

TIME: 16:37:40

Input Set : N:\Crif3\RULE60\09783338A.raw

Output Set: N:\CRF3\12182001\I783338A.raw

RECEIVED

JAN 08 2002

TECH CENTER 1600/2900

67 (x) PUBLICATION INFORMATION:
 68 (A) AUTHORS: Glazer, Peter M.
 69 Havre, Pamela A.
 70 (K) RELEVANT RESIDUES IN SEQ ID NO:1: FROM 1 TO 11
 72 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
 74 NAGGAAGGGG G
 80 (2) INFORMATION FOR SEQ ID NO: 2:
 82 (i) SEQUENCE CHARACTERISTICS:
 83 (A) LENGTH: 10 base pairs
 84 (B) TYPE: nucleic acid
 85 (C) STRANDEDNESS: single
 86 (D) TOPOLOGY: linear
 88 (ii) MOLECULE TYPE: DNA (genomic)
 90 (iii) HYPOTHETICAL: NO
 92 (iv) ANTI-SENSE: NO
 94 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
 96 AGGAAGGGGG
 98 (2) INFORMATION FOR SEQ ID NO: 3:
 100 (i) SEQUENCE CHARACTERISTICS:
 101 (A) LENGTH: 10 base pairs
 102 (B) TYPE: nucleic acid
 103 (C) STRANDEDNESS: single
 104 (D) TOPOLOGY: linear
 106 (ii) MOLECULE TYPE: DNA (genomic)
 108 (iii) HYPOTHETICAL: NO
 110 (iv) ANTI-SENSE: NO
 112 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
 114 GGGGGAAGGA
 117 (2) INFORMATION FOR SEQ ID NO: 4:
 119 (i) SEQUENCE CHARACTERISTICS:
 120 (A) LENGTH: 8 base pairs
 121 (B) TYPE: nucleic acid
 122 (C) STRANDEDNESS: single
 123 (D) TOPOLOGY: linear
 125 (ii) MOLECULE TYPE: DNA (genomic)
 127 (iii) HYPOTHETICAL: NO
 129 (iv) ANTI-SENSE: NO
 131 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
 133 CCCCCTTC
 135 (2) INFORMATION FOR SEQ ID NO: 5:
 137 (i) SEQUENCE CHARACTERISTICS:
 138 (A) LENGTH: 11 base pairs
 139 (B) TYPE: nucleic acid
 140 (C) STRANDEDNESS: single
 141 (D) TOPOLOGY: linear
 143 (ii) MOLECULE TYPE: DNA (genomic)
 145 (iii) HYPOTHETICAL: NO
 147 (iv) ANTI-SENSE: NO
 149 (ix) FEATURE:

11

10

10

8

RAW SEQUENCE LISTING

DATE: 12/18/2001

PATENT APPLICATION: US/09/783,338A

TIME: 16:37:40

Input Set : N:\Crf3\RULE60\09783338A.raw

Output Set: N:\CRF3\12182001\I783338A.raw

```

150      (A) NAME/KEY: misc_feature
151      (B) LOCATION: 1..11
152      (D) OTHER INFORMATION: /function= "N is
153 4'-hydroxymethyl-4,5',8-trimethylpsoralen"
155      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
157 NGGGGGAAGG A                                     11
159 (2) INFORMATION FOR SEQ ID NO: 6:
161      (i) SEQUENCE CHARACTERISTICS:
162          (A) LENGTH: 18 base pairs
163          (B) TYPE: nucleic acid
164          (C) STRANDEDNESS: single
165          (D) TOPOLOGY: linear
167      (ii) MOLECULE TYPE: DNA (genomic)
169      (iii) HYPOTHETICAL: NO
171      (iv) ANTI-SENSE: NO
173      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
175 GGTTCGAATC CTTCCCCC                               18
177 (2) INFORMATION FOR SEQ ID NO: 7:
179      (i) SEQUENCE CHARACTERISTICS:
180          (A) LENGTH: 18 base pairs
181          (B) TYPE: nucleic acid
182          (C) STRANDEDNESS: single
183          (D) TOPOLOGY: linear
185      (ii) MOLECULE TYPE: DNA (genomic)
187      (iii) HYPOTHETICAL: NO
189      (iv) ANTI-SENSE: NO
193      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
195 GGTTCGAAAC CTTCCCCC                               18
197 (2) INFORMATION FOR SEQ ID NO: 8:
199      (i) SEQUENCE CHARACTERISTICS:
200          (A) LENGTH: 35 base pairs
201          (B) TYPE: nucleic acid
202          (C) STRANDEDNESS: single
203          (D) TOPOLOGY: linear
205      (ii) MOLECULE TYPE: DNA (genomic)
207      (iii) HYPOTHETICAL: NO
209      (iv) ANTI-SENSE: NO
211      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
213 TGGTGGTGGG GGAAGGATTC GAACCTTCGA AGTCG          35
215 (2) INFORMATION FOR SEQ ID NO: 9:
217      (i) SEQUENCE CHARACTERISTICS:
218          (A) LENGTH: 35 base pairs
219          (B) TYPE: nucleic acid
220          (C) STRANDEDNESS: single
221          (D) TOPOLOGY: linear
223      (ii) MOLECULE TYPE: DNA (genomic)
225      (iii) HYPOTHETICAL: NO
227      (iv) ANTI-SENSE: NO
231      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

```

RAW SEQUENCE LISTING

DATE: 12/18/2001

PATENT APPLICATION: US/09/783,338A

TIME: 16:37:40

Input Set : N:\Crif3\RULE60\09783338A.raw

Output Set: N:\CRF3\12182001\I783338A.raw

```

233 CGACTTCGAA GGTTCGAATC CTTCCCCCAC CACCA
235 (2) INFORMATION FOR SEQ ID NO: 10:
237     (i) SEQUENCE CHARACTERISTICS:
238         (A) LENGTH: 121 base pairs
239         (B) TYPE: nucleic acid
240         (C) STRANDEDNESS: single
241         (D) TOPOLOGY: linear
243     (ii) MOLECULE TYPE: DNA (genomic)
245     (iii) HYPOTHETICAL: NO
247     (iv) ANTI-SENSE: NO
249     (ix) FEATURE:
250         (A) NAME/KEY: misc_feature
251         (B) LOCATION: 1..60
252         (D) OTHER INFORMATION: /function= "At positions 16 and 57,
253 N is G or T."
255     (ix) FEATURE:
256         (A) NAME/KEY: misc_feature
257         (B) LOCATION: 1..121
258         (D) OTHER INFORMATION: /function= "At position 17, N is A,
259 G or T."
261     (ix) FEATURE:
262         (A) NAME/KEY: misc_feature
263         (B) LOCATION: 1..121
264         (D) OTHER INFORMATION: /function= "At position 18, N is A,
265 C or T."
268     (ix) FEATURE:
269         (A) NAME/KEY: misc_feature
270         (B) LOCATION: 1..121
271         (D) OTHER INFORMATION: /function= "At position 20, N is G
272 or A."
274     (ix) FEATURE:
275         (A) NAME/KEY: misc_feature
276         (B) LOCATION: 1..121
277         (D) OTHER INFORMATION: /function= "At position 24, N is C
278 or T."
280     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
282 TGGTGGTGGG GGAAGNNNTN GAANCTTCGA AGTCGATGAC GGCAGATTTA GAGTCTNCTC      60
284 CCTTTGGCCG CTCGGGAACC CCACCACAGG TAATGCTTTT ACGGGGCGCA TCATATCAAA      120
286 T                                          121
288 (2) INFORMATION FOR SEQ ID NO: 11:
290     (i) SEQUENCE CHARACTERISTICS:
291         (A) LENGTH: 121 base pairs
292         (B) TYPE: nucleic acid
293         (C) STRANDEDNESS: single
294         (D) TOPOLOGY: linear
296     (ii) MOLECULE TYPE: DNA (genomic)
298     (iii) HYPOTHETICAL: NO
300     (iv) ANTI-SENSE: NO
302     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

```

RAW SEQUENCE LISTING

DATE: 12/18/2001

PATENT APPLICATION: US/09/783,338A

TIME: 16:37:40

Input Set : N:\Crif3\RULE60\09783338A.raw

Output Set: N:\CRF3\12182001\I783338A.raw

```

304 ATTTGATATG ATGCGCCCCG TAAAGCATT ACCTGTGGTG GGGTCCCCGA GCGGCCAAAG      60
306 GGAGCAGACT CTAAATCTGC CGTCATCGAC TTCGAAGGTT CGAATCCTTC CCCCACCACC      120
308 A                                          121
310 (2) INFORMATION FOR SEQ ID NO: 12:
312     (i) SEQUENCE CHARACTERISTICS:
313         (A) LENGTH: 121 base pairs
314         (B) TYPE: nucleic acid
315         (C) STRANDEDNESS: single
316         (D) TOPOLOGY: linear
318     (ii) MOLECULE TYPE: DNA (genomic)
320     (iii) HYPOTHETICAL: NO
322     (iv) ANTI-SENSE: NO
325     (ix) FEATURE:
326         (A) NAME/KEY: misc_feature
327         (B) LOCATION: 1..121
328         (D) OTHER INFORMATION: /function= "At position 7, N is G
329 or T."
331     (ix) FEATURE:
332         (A) NAME/KEY: misc_feature
333         (B) LOCATION: 1..121
334         (D) OTHER INFORMATION: /function= "At positions 12, 20 and
335 117, N is C or G."
337     (ix) FEATURE:
338         (A) NAME/KEY: misc_feature
339         (B) LOCATION: 1..121
340         (D) OTHER INFORMATION: /function= "At positions 15, 16,
341 21, 29, 78, 83 and 108, N is A or G."
342     (ix) FEATURE:
343         (A) NAME/KEY: misc_feature
344         (B) LOCATION: 1..121
345         (D) OTHER INFORMATION: /function= "At positions 18, 49,
346 68, 69, and 107, N is C or T."
347     (ix) FEATURE:
348         (A) NAME/KEY: misc_feature
349         (B) LOCATION: 1..121
350         (D) OTHER INFORMATION: /function= "At position 114, N is
351 C, T or A."
353     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
355 TGGTGGNGGG GNAANNANTN NAACCTTCNA AGTCGATGAC GGCAGATTNN GAGTCTNCTC      60
357 CCTTTGGNNG CTCGGGANCC CCNCCACAGG TAATGCTTTT ACGGGGNNCA TCANNTNAAA      120
359 T                                          121
362 (2) INFORMATION FOR SEQ ID NO: 13:
364     (i) SEQUENCE CHARACTERISTICS:
365         (A) LENGTH: 121 base pairs
366         (B) TYPE: nucleic acid
367         (C) STRANDEDNESS: single
368         (D) TOPOLOGY: linear
370     (ii) MOLECULE TYPE: DNA (genomic)
372     (iii) HYPOTHETICAL: NO

```

VERIFICATION SUMMARY

DATE: 12/18/2001

PATENT APPLICATION: US/09/783,338A

TIME: 16:37:41

Input Set : N:\Crf3\RULE60\09783338A.raw

Output Set: N:\CRF3\12182001\I783338A.raw

L:28 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]